

SIGN LANGUAGE ON WHICH THOUSANDS OF DOLLARS DEPEND

Queer Motions of Hand and Fingers Used by Chicago Grain Pit Traders Between the Hours of 9:30 A. M. and 1 P. M. Each Day

ONE of the queerest sign languages employed anywhere in the world is to be found in Chicago. It is different from other sign languages in that it is called into use only between the hours of 9:30 A. M. and 1 P. M. each day. Except in that period its users depend upon ordinary methods of speech for communication.

But perhaps the most remarkable feature of this sign language lies in the fact that its characters, while only nine in number, are of such far-reaching importance that thousands of dollars are involved practically every time one of them is made.

This system of communication is the means by which brokers on the Chicago Board of Trade conduct their business of buying and selling on the open market. It is peculiar to this institution, being unlike the method used on the floor of any other exchange in the world.

To the casual visitor watching the crowds congregated about the different pits during a flurry in prices the signs used by the traders have no meaning, but with the experienced trader a simple movement of the hand attracts attention and at the same time conveys all the information necessary to consummate a deal.

This sign language has developed with the growth of the board and its use has long been a necessity. The turmoil and hurly burly resulting from a thousand traders seeking to attract attention at once, added to the clicking of hundreds of high keyed telegraph instruments and the noise of a small army of messenger and errand boys scurrying about, makes articulate speech practically impossible. Then, too, the eye is quicker than the ear, and the signs given with the hand or by a movement of the head mean as much as a telegram to the person addressed and frequently permit the closing of a trade when, if time had been lost in an attempt to reach the side of the man making an offer, some change might have taken place in the market and the opportunity would have been lost.

The sign manual of the pit trader is simplicity itself, and with a very little practice any one can become adept at it, although, of course, this does not mean that it will make him a master of the strategy and generalship demanded of a good broker. For instance, wheat having sold at 90 cents, a trader catches the eye of some one opposite in the pit who has 50,000 bushels to sell, and partly by telepathy and partly by a motion of the clenched fist he signals that he will take the "90" wheat at 90.

The seller, in reply, holds up his right hand with the index finger extended horizontally, indicating that he wants $\frac{1}{4}$ cent more than the price quoted, or 90 $\frac{1}{4}$ cents. The buyer motions acceptance and signals back "14." The seller and buyer then note on their cards "Sold 50 at $\frac{1}{4}$ Jones" and "Sold 50 at $\frac{1}{4}$ Smith" respectively, the number of bushels bought and sold always meaning some thousands. After leaving the pit the two traders meet and check the operations.

All prices are indicated by the hand and fingers when held in a horizontal position. The clenched fist means the price in even cents. Each outstretched finger, the fingers being spread apart, represents an added eighth of a cent up to five-eighths; the extended hand with all the fingers pressed together



This remarkable flashlight photograph, the only one of its kind ever made, was taken in the centre of the wheat pit of the Chicago Board of Trade during an exciting moment of actual trade, the figures being unposed. The hands of the traders were caught in characteristic positions, illustrating practically every figure of the traders' sign manual.

means three-quarters, and the thumb only signals seven-eighths.

The hand displayed vertically refers to quantities, each extended finger meaning 5,000 bushels up to 25,000 for the entire hand. Whether the grain is being offered or bid for is shown by a slight motion of the hand or from the trader making the signal.

The official reporter stationed in each pit sees all this signalling, and informs by observation and partly on information given him by the traders notes the latest price and gives it to a telegraph operator at his side to be put on the ticker. Thus the price of grain is made every moment of the session and transmitted to all the markets of the world.

While the visitor who sits in the gallery overlooking the floor and understands nothing of what is going on below is likely to be impressed with the thought that he is looking at a lunatic asylum, there is really no other busi-

ness so well organized that one man will accept a nod and a shake of the finger for thousands of dollars without discussion. This means that it is a business imbedded in honor.

No contract, either written or oral, is more binding than the contracts to which a member of the association is a party. No informality, no absence of legal technicalities will avail under the rules of the association to absolve a man from undeviating compliance with every term and every feature of his business obligation. Every pretext for the avoidance of such obligation is brushed aside by a jury, not of a court, but of business men, his peers, and is not permitted to obscure the spirit and intent of his promises, or to release him from his responsibilities as a man and as a merchant. When it is considered that in a single year more than 500,000,000 bushels of grain have been dealt in on the board the success of the system employed is apparent.

The system of buying and selling for future delivery as applied to grain especially and as practiced upon and safeguarded by the rules of the grain exchanges located in the great primary markets is much discussed and regarding it there is more or less misunderstanding. It operates in the interest of the farmer and interior grain buyer.

It provides for the economical marketing of the chief grain crops of the West, and creates and maintains a broad, active and constant market for the sale of grain and provisions independent of an immediate, actual, existing consumptive demand. What is more important to the agriculturist, it provides him with ready money, which in turn finds its way through the country stores to wholesale merchants in great centres of trade and keeps the complicated machinery of business in harmonious activity.

It also has the effect of bringing to

the knowledge of the grain dealer and the farmer all the facts which are necessary for them to know in order to arrive at the intrinsic value of their grain as measured by the supply and the demand the world over and the year through. Under its operation all information concerning the movement of grain and the markets of the world is placed at the service of the public.

The great grain exchanges have been described as really the farmer's best friend, whether they mean to be or not. They serve him as well and as faithfully as any association of his own ever could and much better than any organization ever has. The producer al-ways wants more money, while the consumer wants lower prices, and the speculator stands between them, protecting them each from the other.

It is interesting to trace a car of grain from its arrival until it is delivered into the elevator. First it is

necessary to provide for the protection of cars from thieves after reaching the neighborhood of the city. For this reason the Chicago Board of Trade maintains a detective service. Many families at the larger terminal grain markets subsist almost wholly on the revenues derived from stealing grain and coal from cars. This practice is not confined to railroad storage yards, but is even carried on while cars are being transported from point to point.

Upon arrival, the first official handling of the contents of a car of grain occurs when it reaches the Chicago inspection yards of any given railroad. There the seals are broken by an employee of the State Grain Inspection Department, to permit inspection and sampling by the State inspectors and the receivers' agents. The cars of a train are then resealed and ordered to the various unloading points, such as public and private elevators, transfer houses, mills and some large wholesale

Simple Sign Manual Has Only Nine Characters, Which Scale From Five-eighths of a Cent to an Even Cent—System of Futures



The traders' sign manual.

feed stores, where they are unloaded and weighed under the supervision of the Board of Trade Weighing Department.

MORE PHYSICAL DEGENERACY DUE TO BAD TEETH THAN TO ABUSE OF ALCOHOL

SOME startling facts about the neglect of our teeth are revealed by Lewis M. Terman, of Leland Stanford Junior University in his new book, "The Hygiene of a Child," issued by Houghton Mifflin Company.

In the chapter devoted to the teeth of school children he says that Dr. William Osler has expressed the belief that more physical degeneracy can be traced to neglect of the teeth than to the abuse of alcohol. It is undeniable that it affects directly very many more people. Of our 20,000,000 school children not over 1,000,000 or 2,000,000 are free from dental disorder of some kind, and of the remainder of the population only a negligible minority.

About one-fifth of all the teeth of our school children are diseased. Every day hundreds of thousands of these teeth are aching. Dental caries has been named by Dr. Jensen "the people's disease"; no other is so widespread.

Diseased teeth are thought to be responsible for a vast amount of ill health, including indigestion, anemia, general debility, mental and physical re-

tardation, nervousness and acute infectious diseases. Complications with heart and ear are common. Life expectancy and industrial efficiency depend in no small degree on the condition of the teeth. Moral efficiency and the joy of living may depend directly or indirectly about as much on one's teeth as on one's philosophy or religion. Who would not agree with Don Quixote that a tooth was worth more than a diamond?

Artificial teeth, to be sure, may be substituted for those which nature gave us, but since their mastication efficiency has been demonstrated to be only about one-tenth that of natural teeth they can hardly be considered a satisfactory substitute.

Two decades ago the mouth of the school child was to the average educated person an unknown quantity. Even the dentist and physician were not aware of the actual conditions except by inference, for the simple reason that only 5 to 10 per cent. of the children ever came to them for examinations. It remained for the school

Prof. Lewis M. Terman Gives Some Startling Facts About the Neglect of Teeth and Resultant Ill Health—Great Majority of Our School Children Suffer From Dental Disorder

doctor and school dentist to ascertain the real facts.

Examinations of thousands of school children in divers parts of the world have shown that fewer than 10 per cent. of our school children are free from diseased teeth or gums, dental caries (decay of teeth) being the most common defect. The average school child has from three to five decaying teeth. Many investigations report as many as 20 to 30 per cent. of all the teeth as affected.

In New York city 61 per cent. of 266,426 children examined had defective teeth, but less than one-fourth had ever entered a dentist's office. The Dental Association in Cleveland found 15,061 cavities in the teeth of 2,677 children, or an average of 5.6 per child. Boston reports 33,575 school children as in need of dental services, and

Brookline 77 per cent. Of 500 New York children who in 1909 applied for certificates permitting them to leave school to go to work 486 had 2,808 decayed teeth; only 5 per cent. had ever visited a dentist except for an extraction; and there was not one "decently clean" mouth in the 500.

Smaller cities have given similar results. Superintendent Johnson reports dental caries in 96.9 per cent. of 497 children of Andover, Mass., and 31.4 per cent. of all the teeth as affected; 22.5 per cent. of the children had suffered from toothache within the previous week. Superintendent Reavis examined 407 children in Oakland City, Ind., and found only 53 with satisfactory teeth. 210 children had from 1 to 4 decayed, and 133 from 5 to 10; 44 children had all four of the six year molars in a carious condition.

Defective teeth may affect the health of the entire body. The influence is chiefly of four kinds: (1) Decreased power of mastication, due either to decay or irregularities of the teeth; (2) the toxic effect of pus which is absorbed directly into the blood or taken into the stomach and intestines; (3) reflex nervous disturbance due to pain, impaction of teeth, and (4) the possibility of acting as a breeding ground and distributing point for the bacteria which cause acute infectious diseases.

Thorough mastication is prevented by defective teeth. This is due to lack of chewing surface, to irregularities which prevent the teeth from meeting evenly and to local tenderness. Many children from 6 to 12 years are deprived of half the normal chewing surface. The loss of one tooth always

means the functional loss of its opposite. Malformation of the jaws, as in severe cases of adenoids or impaction (crowding), makes mastication practically impossible for many children.

Mastication has a larger function than merely to prepare the food for swallowing. When thoroughly performed it trebles or quadruples the amount of saliva, mixes it thoroughly with the food and initiates one of the essential processes of digestion, the conversion of starch into sugar. This is the only part of digestion over which we have direct voluntary control.

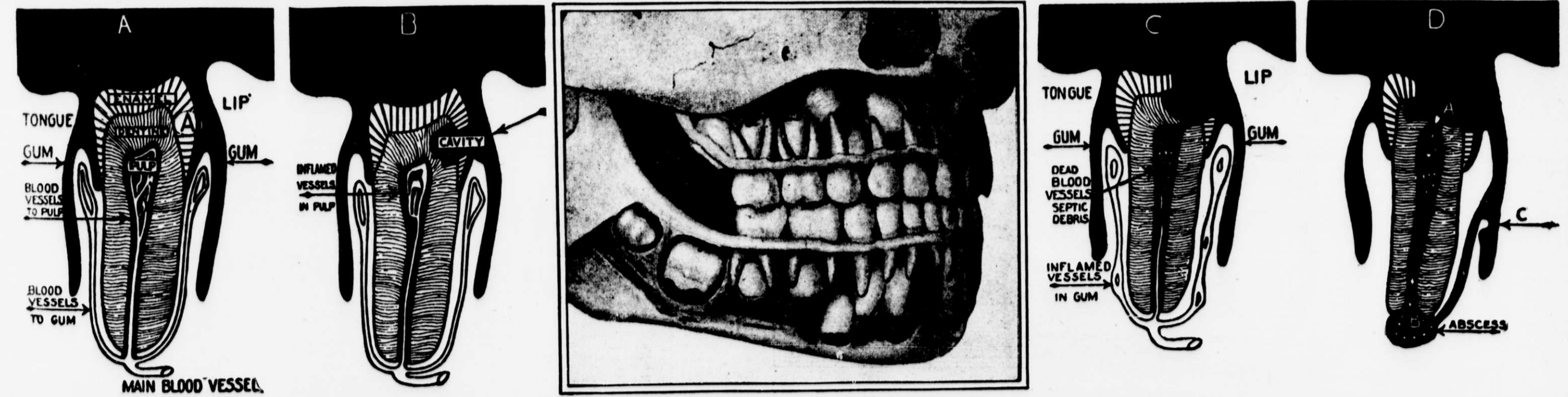
Pedley says that the only fit analogy to the chronic gumboil is the serpent's tooth, through the hollow of which the deadly venom is injected into the flesh of its victim. If there is pus in the mouth arising either from decayed teeth or diseased gums some of it will be mixed with the food during the process of mastication and swallowed. The constant absorption of millions of virulent bacteria causes a septic condition of the intestines, resulting in irritation of the intestinal lining,

catarrh, diminished secretions, anemia and general weakness. The bacteria may be carried by the blood to distant parts of the body, giving rise to glandular disturbances, inflammation of the heart, etc. The child with extreme oral sepsis is likely to be sallow, thin and nervous.

Bad teeth may cause nervousness either indirectly by causing malnutrition or directly from the reflex irritation which aching or crowded teeth produce. Motor automatisms sometimes result and moral self-control may become impossible. Even choreiform movements and epileptiform seizures may occur. Dr. Jensen examined the teeth of thirty-one stammerers and stutters and found nearly twice the usual amount of defectiveness.

Another investigator examined fifty-eight persons with the skiagraph (an instrument for recording irregularities of the teeth) and found that all who suffered impaction showed signs of nervous disorder. The symptoms ranged

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A—Normal tooth tissues with commencing caries at A.
B—Cavity formed through enamel into dentine by means of acid bacteria, irritating pulp and causing swelling of the blood vessels, inflammation and pain.

The replacing of the temporary teeth.
Showing the rudimentary permanent teeth imbedded below the roots of the temporary teeth.

C—Death of the blood vessels and infection of the pulp cavity with septic germs from the mouth. Inflamed vessels around raising tooth in socket. Pain on biting.
D—Opening into pulp cavity plugged with food or debris, preventing escape of decomposing gases at A and forcing a passage at B, forms an abscess which discharges at C as a gumboil.